

Lobos Creek Dunes Boardwalk Guide

National Park Service
U.S. Department of the Interior

Presidio of San Francisco
Golden Gate
National Recreation Area



1. Lobos Creek Valley: An Urban Oasis



View looking down Lobos Creek valley, early 1900s

With a resolute whisper, Lobos Creek flowed past our home on its mile-long journey to the ocean. It was bordered, at times covered with watercress and alive with minnows, tadpoles, and a variety of larvae. In spring, flowers were rampant and fragrant. In heavy fog, the creek was eerie, rippling out of nowhere and vanishing into nothingness. - Ansel Adams, 1985

Welcome to Lobos Creek valley. When photographer Ansel Adams grew up nearby in the early 1900s, the creek (100 feet to the south) flowed through sparsely populated dunes. Since then, urbanization and introduced plants have changed the

landscape. Today, ecological restoration is bringing back the natural character of this small area of sand dune, dune scrub, and streamside habitats. Lobos Creek valley is once again becoming a thriving natural area at the edge of the city.

2. A Creek in the City



Lobos Creek

For thousands of years, native Ohlone (*Oh-loh-nee*) people came to Lobos Creek to hunt and gather food such as acorns, cattails, and stinging nettles. Today, Lobos Creek is the last year-round free-flowing creek in San Francisco, and the primary water source for the Presidio.

As in the Ohlone era, remnants of the original oak woodland still line the creek, providing food and shelter for a variety of wildlife. Springs slowly feed the creek, which meanders a half mile from here to meet salty ocean water on Baker Beach.

3. Invasive Weeds



Grasses crowd native plants

When plants are moved from their native habitat to a new environment, their competitors, diseases, and the animals that eat them are often left behind. Some introduced plants grow out of control and become invasive weeds that can wipe out native plants and animals.

Others were deliberately planted, such as grasses for grazing and trees for wind-breaks. These imports displaced the native plants and stabilized the dynamic dunes.

Many of the Presidio's non-native plants came here accidentally as stowaway seeds.

Today, weeding by staff and volunteers keeps the dunes open and has controlled once-dominant weeds such as iceplant and wild radish, but new species like grasses continue to pose a threat to native plants.

4. Ecological Restoration



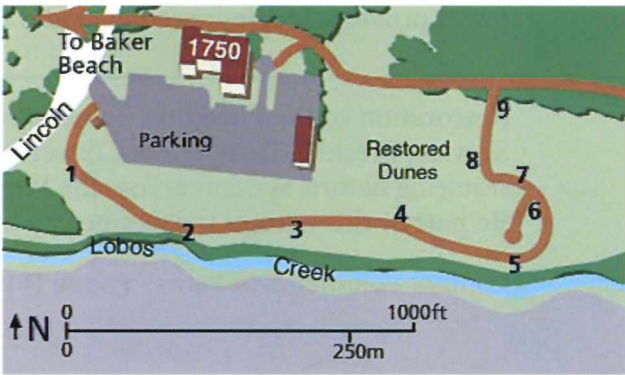
Monitoring the restoration

Ecological restoration is a new field of biology that seeks to repair the natural functions of damaged ecosystems. Can you imagine this valley before restoration? It was covered in grass and weeds with few remaining native plants and animals. When restoration began in 1995, dune hills were re-created, and the Presidio Nursery was established to grow local native plants.

Lobos Creek Dunes restoration site is part of 200 acres of native habitat in the Presidio, and the dunes are now home to 130 plant species and many animals. These natural areas preserve some of the last vestiges of San Francisco's natural legacy and are a refuge for endemic plants found nowhere else in the world.



Annual plants, like the colorful dune gilia at left, cope with summer drought by sprouting, making seed and dying in a single season.



Look for stop markers along the Lobos boardwalk at the locations shown at left. Stop numbers are indicated at the left margin of this guide, next to the section captions.

5. **Wildlife:**
Then and Now



White-crowned sparrow

Listen and look around. Although former inhabitants like grizzly bears, bobcats and jackrabbits no longer live here, the valley's varied dune, scrub, and woodland habitats provide food and shelter for many birds and some smaller mammals. In addition to the many year-round inhabitants, the riparian forest along the creek is a refuge for migratory songbirds in the spring and fall.

The needs of wildlife are again being met at Lobos Creek Dunes. In 2001, Nuttall's White-crowned Sparrows nested here for first time since restoration. This resident subspecies requires dense scrub to breed.

Red-tailed Hawks often circle overhead. They benefit from the open habitat of restored areas with abundant prey such as lizards, gophers and other bird species.

6. **Restoration History**



San Francisco lessingia

How can a sewer pipe restore a valley? In 1994, a large sewer pipe broke in Lobos Creek valley. In order to replace the sewer, the City of San Francisco provided mitigation money to restore the disturbed habitat, which was home to an endangered endemic plant called San Francisco lessingia (*Lessingia germanorum*).

Lessingia is a tiny member of the sunflower family that evolved on the isolated San

Francisco peninsula. Adapted to patches of recently disturbed open sand, this foot-tall annual wildflower was once common in San Francisco but now grows only in the Presidio and on San Bruno Mountain.

Lobos Creek Dunes was the Presidio's first large ecological restoration project. The National Park Service, Parks Conservancy, and many volunteers worked together to restore this vanishing rare plant community.

7. **Dune Insects**



Acmon Blue

Bluete

Dune insects are adapted to extremes of sun and fog. Some of these specialized insects have returned to Lobos Dunes, but competition from recently-introduced Argentine ants, pill bugs, and earwigs may be affecting native insect diversity.

A wide variety of butterflies benefit from habitat restoration and can be sighted here year-round. Caterpillars and adult butterflies rely on plants for survival, and some

like the **acmon blue** prefer specific plant species (lupines and coast buckwheat).

Bluets are one of 40 species of damselflies in California. Often confused for dragonflies, smaller damselflies live near creeks where their offspring, called nymphs or naiads, develop in the water. Both young and adults prey on other insects. Look also for velvet ants and bumblebees.

8. **Sand Dune Plants**



Silvery lupine

Coastal dunes are a mosaic of moving and stable sand. Dune plants are adapted to extremes of wind, soil moisture, and shifting sand. Most other plants cannot tolerate these conditions.

Plants of open dunes are low growing and cope with desert-like conditions. **Silvery lupine's** hairy leaves help it to both capture moisture and reduce moisture loss. Like many dune plants, its light-colored leaves reflect the sun's heat.

In more sheltered areas, shrubs like coyote bush and silvery lupine germinate. Once established, these shrubs protect seedlings of other species and water them with "fog drip."

Lobos valley holds five rare or endangered dune plants among its 130 native species, including San Francisco lessingia and dune gilia (pictured above).

9. **Presidio Forest**



Cypress monoculture

In the 1890s, the Army planted Monterey pine, Monterey cypress, and blue gum eucalyptus during a major landscaping project. The forest here covers a former natural dune habitat. Very few plants grow under these trees due to shade and organic matter that makes the sand acidic and water-repellent, conditions incompatible with most dune plant species. However, the forest provides feeding, nesting, and

roosting habitat for birds like Red-tailed Hawks and Pygmy Nuthatches.

Many of these trees are nearing the end of their life span. The fate of this forested area is still to be determined. Some patches of declining trees may be replaced with native plant communities to link the natural areas in the Presidio's southwest corner.



Restoration of the Presidio's natural areas is a joint effort between the National Park Service, Presidio Trust, Parks Conservancy, and community stewards. Together we are restoring natural systems across the Presidio, providing a window into San Francisco's past. Be part of this natural renaissance by becoming a park steward.

Contact Volunteers-in-Parks - Phone (415) 561-3034 X3445 or visit www.nps.gov/goga/vip/